

Serial No.: 10/675,432  
Response to Office Action

Docket No. 1001.29  
Customer No. 53953

### REMARKS

Applicant respectfully requests reconsideration of this application in view of the following remarks. Claims 1, 4, 5, 8, 9, 10, 11, 14, 15, 18, 19 and 20 have been amended. Claims 1-20 are pending. Antecedent basis for the amendments is located throughout Applicant's specification and the original claims, as for example in connection with the discussion of Figs. 3 and 4 at page 11, line 22 through page 16, line 22. Accordingly, no new matter has been entered.

Also, the specification has been amended to correct a typographical error. At page 15, line 23 through page 16, line 2, the specification states, "During the clock cycle  $k+1$ ...the multiplexer 112 outputs information from such words  $W_{xz}$  of the address's associated Set  $x$  to the latch 148 via the control logic 100 and bus 116." In the immediately following sentence, at page 16, lines 3-4, the specification states, "In response to the start of a next clock cycle  $k+1$ , the latch 148 receives and stores such information from the words  $W_{xz}$ ." Clearly, therefore, at page 16, line 3, "clock cycle  $k+1$ " is a typographical error. Accordingly, no new matter has been entered.

### Rejection of the claims

The Office Action rejected claims 1 and 11 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. 2004/0210728 ("Flautner").

As amended, claim 1 recites:

1. A method of reducing power consumption in an  $N$ -way set-associative cache memory having  $Y$  sets, wherein  $N$  is a first integer, and wherein  $Y$  is a second integer, the method comprising:

during a first clock cycle  $k$ , in response to an address, identifying an associated set in the cache memory, comparing the address to respective tag portions of  $N$  blocks in the associated set, and outputting a signal in response thereto, wherein  $k$  is an integer; and

during a second clock cycle  $k+1$ , in response to the signal indicating that one of the  $N$  blocks in the associated set is a match with the address, reading a non-tag portion of the matching block in the associated set, while non-tag portions of  $N-1$  non-matching blocks in the associated set are disabled, and while non-tag portions of  $Y-1$  non-associated sets are disabled.

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As amended, claim 11 recites:

11. A system for reducing power consumption in an  $N$ -way set-associative cache memory having  $Y$  sets, wherein  $N$  is a first integer, and wherein  $Y$  is a second integer, the system comprising:

first circuitry for: during a first clock cycle  $k$ , in response to an address, identifying an associated set in the cache memory, comparing the address to respective tag portions of  $N$  blocks in the associated set, and outputting a signal in response thereto, wherein  $k$  is an integer; and

second circuitry for: during a second clock cycle  $k+1$ , in response to the signal indicating that one of the  $N$  blocks in the associated set is a match with the address, reading a non-tag portion of the matching block in the associated set, while non-tag portions of  $N-1$  non-matching blocks in the associated set are disabled, and while non-tag portions of  $Y-1$  non-associated sets are disabled.

In MPEP § 2131, the PTO provides that:

*"[t]o anticipate a claim, the reference must teach every element of the claim...."*

Therefore, to sustain a rejection of amended claim 1, Flautner must contain all of the above-recited elements in amended claim 1. However, Flautner fails to teach the combination of elements in amended claim 1. In fact, the Office Action's cited portion of Flautner actually teaches away from such a combination.

Accordingly, Flautner fails to support a rejection of amended claim 1 under 35 U.S.C. § 102(e). In relation to amended claim 11, Flautner is likewise defective in supporting a rejection under 35 U.S.C. § 102(e).

Likewise, in relation to amended claim 1, Flautner is defective in supporting a prima facie case of obviousness. As between Flautner and Applicant's specification, only Applicant's specification teaches the combination of elements in amended claim 1. In fact, the Office Action's cited portion of Flautner actually teaches away from such a combination.

Accordingly, in relation to amended claim 1, the PTO's burden of factually supporting a prima facie case of obviousness has not been met. In relation to amended claim 11, Flautner is likewise defective in supporting a prima facie case of obviousness.

Thus, a rejection of amended claims 1 and 11 is not supported.

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### Conclusion

For these reasons, and for other reasons clearly apparent, Applicant respectfully requests allowance of claims 1 and 11.

Dependent claims 2-10 depend from and further limit claim 1 and therefore are allowable.

Dependent claims 12-20 depend from and further limit claim 11 and therefore are allowable.

An early formal notice of allowance of claims 1-20 is requested.

To the extent that this Response to Office Action results in additional fees, the Commissioner is authorized to charge deposit account no. 50-3524.


Applicant has made an earnest attempt to place this case in condition for allowance. If any unresolved aspect remains, the Examiner is invited to call Applicant's attorney at the telephone number listed below.

Respectfully submitted,



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